

KTN

the
Knowledge Transfer
Network



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ktn-uk.org @KTNUK



Gabriela Salejova

Joining Up the Solar Landscape

Who is Solar Energy Systems SIG ?

Funded by Innovate UK & delivered by KTN

- Cross sectoral team spanning **Energy, Built Environment** and **Electronics & Photonics** assets
- Core Team supported and informed by the **Industrial Leadership Group**

ARUP

bre



OXFORD PV



SHARP



Department
of Energy &
Climate Change

LarkEnergy

SOUTH DOWNS SOLAR
a world worth saving



J BRAND
"My Customer, My Responsibility"

POWERVAULT



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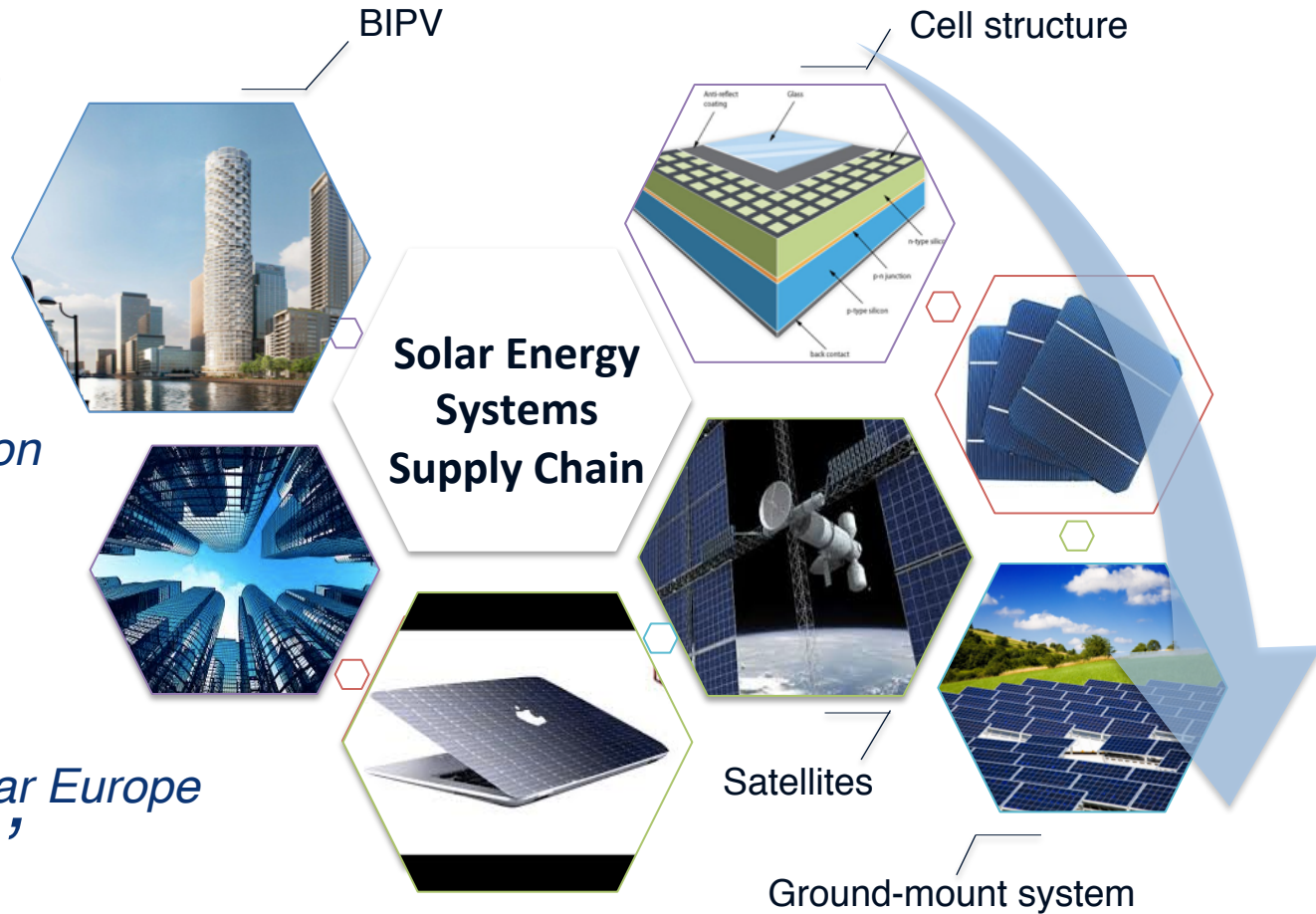
What does SES SIG do?

From components to systems

‘ We are looking at a whole supply value chain to investigate opportunities for UK investment ’

‘Identifying key innovation needs to meet long-term objectives in solar PV ’

‘Aligning activities and communicating with Solar Europe Industry Initiative (SEII). ’



BIPV Market

Gaining confidence in rapidly growing sector

“Currently niche market (worth £1.7bn) is growing rapidly from 1.8GW of installed BIPV capacity today to 6GW by 2020.” – Pike Research

“Europe accounts for 41% of BIPV installations, followed by 27% in North America.” – Transparency Market Research

“Curtain wall technologies will be the fastest growing segment of the market.” – Transparency Market Research

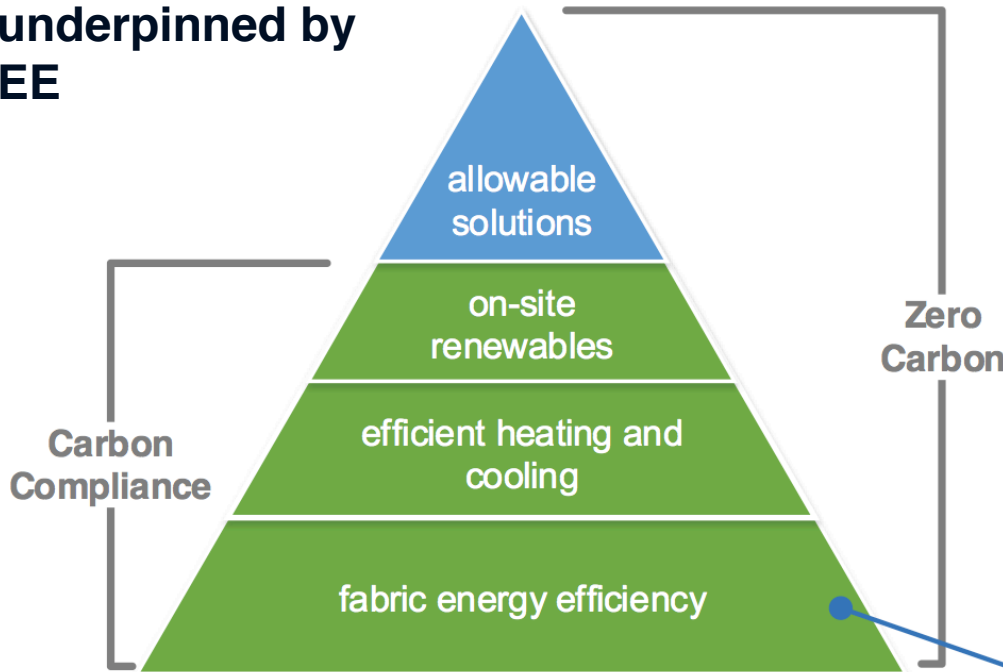
“The race for the best solar cells technology has a new candidate: Perovskite.” – Helmholtz-Centre Berlin



Energy Efficiency in Buildings

Encouraging right behavior

Hierarchy
underpinned by
EE



Oxford PV, Zero Carbon Hub's hierarchy triangle

Focus on **fabric first**



Heating and cooling

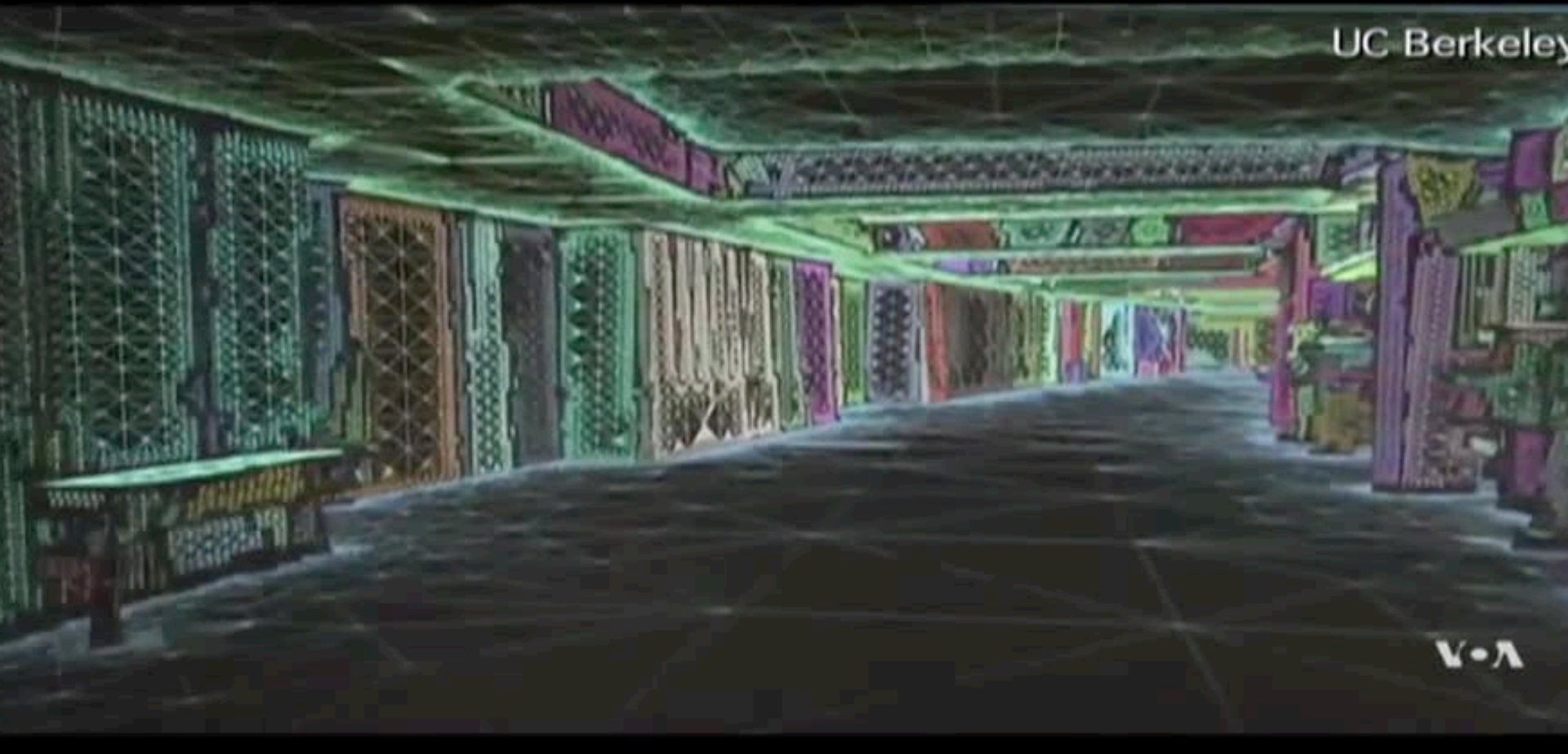


PV contribution possible

**EU 2020 carbon targets
only possible if
renewables contribute
more!**

Tool to Map Energy Efficiency

Backpack mounted device



SES SIG and BIPV

Accelerating innovation in BIPV market

April 2015

Opportunities in BIPV

- Engage with applied BIPV market
- Recognise advantages, tremendous potential
- Connect building industry with solar power industry
- Find way forward – addressing challenges and barriers



Revenue streams for both parties



SES SIG and BIPV

Accelerating innovation in BIPV market

Opportunities for BIPV

- 1 New technologies and production processes
- 2 Flexibility provided:
 - Fabric performance
 - Heating & cooling design
- 3 Legislation – orchestrate technical, financial & aesthetic drivers
- 4 Meet the demand for variety of products
- 5 Reduction of CO₂ emission and gain in efficiency

Long-term sustainable solution



Sustainability Award to Town Office Tower in Erdberg

BIPV Market

Accelerating innovation in BIPV market

Challenges

- 1 Fit into construction sector value chain
- 2 Integrated PV product = **architectural product**
- 3 Have products that are flexible in size
- 4 Understanding of products, their installation and maintenance
- 5 Standards and certification for products/installation
- 6 BIPV product must deliver:
 - Aesthetics
 - Performance
 - Lifetime



Thank you



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